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PHOTOGRAPHIC INTERPRETATION REPORT

# LAUNCH COMPLEX
# EMBA MISSILE TEST CENTER
# USSR

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FEBRUARY 1968
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19 PAGES

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PHOTOGRAPHIC INTERPRETATION REPORT

# LAUNCH COMPLEX
# EMBA MISSILE TEST CENTER
# USSR

FEBRUARY 1968

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

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# PREFACE

This photographic interpretation report is part 1 of a series of basic reports on the Emba Missile Test Center. It is prepared in partial response to CIA requirement C-DI6-83,316 (revised), which requested a basic report on the Emba Missile Test Center. Part 1 deals with the launch complex. Support elements, tracking facilities, and airfields will be reported at a later date.

All TALENT and KEYHOLE coverage of Emba Missile Test Center up to and including KEYHOLE was utilized in compiling this report. All measurements presented in this report were accomplished by the NPIC Technical Intelligence Division and are considered accurate within the following tolerances:

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Horizontal measurements
± 5 feet

Vertical measurements
± 10 feet

Azimuthal measurements
± 2 degrees



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## INTRODUCTION

The Emba Missile Test Center (Figure 1) is located at 48-33N 058-03E, just south of the town of Emba in Kazakhskaya SSR, approximately 420 nautical miles (nm) east of the Kapustin Yar/Vladimirovka Missile Test Center and approximately 250 nm northwest of Tyuratam Missile Test Center. The range consists of a launch complex, 3 support areas, an electronics site, a bell-shaped pattern of 9 tracking facilities, 2 airfields, and a drone launch facility.

First observance of the test range [redacted] At that time, all major facilities were either in existence or in partial existence. The entire range, including rail spurs, was not present [redacted] Therefore, initial construction of the range took place in the 28 months between February 1960 and June 1962.

The Launch Complex (Figures 2 and 3) is composed of Launch Area A, Launch Area B, the Assembly/Checkout Area, and an Unidentified Area. Since initial observance in 1962, Launch Area A has been expanded from a 2-pad facility to a 6-pad facility; 3 new assembly/checkout buildings have been added to the Assembly/Checkout Area, and Launch Area B is being constructed as a mirror image of the original Launch Area A.

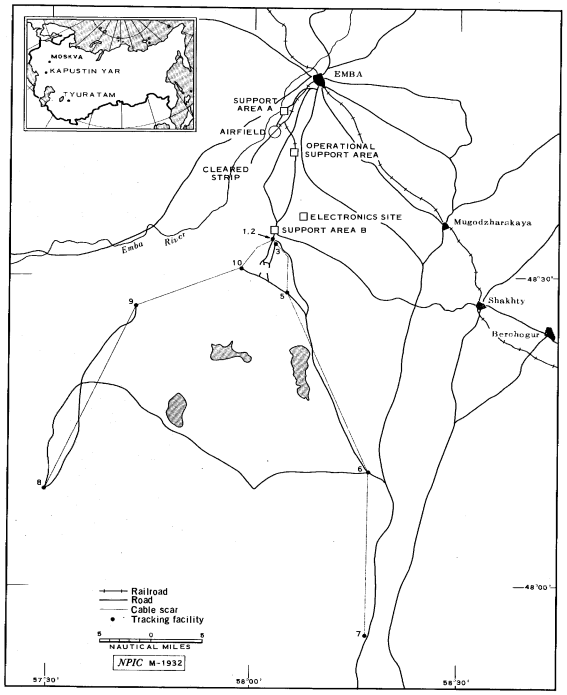


*FIGURE 1. EMBA MISSILE TEST CENTER, USSR.*

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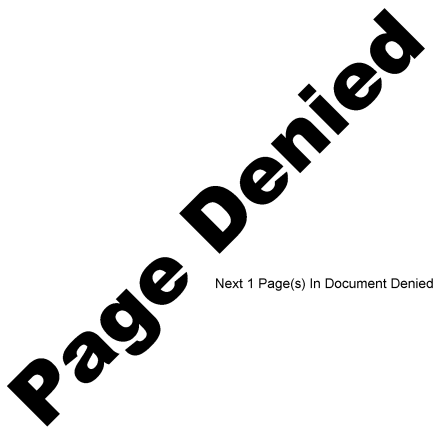


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# LAUNCH COMPLEX

## LAUNCH AREA A

Launch Area A (Figures 7 and 8) presently contains 6 concrete pads, a control-guidance area, 10 support buildings, a calibration tower, and a parking area. It is double secured and served by a looping rectangular road which is divided into unequal segments by an extension of the launch area access road. These service roads are raised and concrete surfaced.

When first observed in June 1962, the launch area consisted of only 2 launch pads, designated A1 and A2, in addition to the control-guidance area and probably 3 support buildings.

Both Pads A1 and A2 are raised concrete positions, each with a paved access ramp. They are located 800 feet apart. Downrange orientation of all pads is approximately

Large-scale photography permitted the identification of GANEF missiles on Pad A1 (Figure 4 and Table 1). Since that time, GANEF missiles and/or transporter-launchers have been identified on Pad A1 or in the vicinity on every large-scale mission of adequate interpretability. This is the only launch position in the launch area where GANEF missiles have been observed.

Pad A2 (Figure 5 and Table 1) has been occupied by probable electronics vehicles on all large-scale photography with the exception of 2 missions. One GANEF tracking/guidance radar was identified in this position A SQUAT EYE radar had been located on the west side of the north-south offset road from the radar was observed 170 feet east of Pad A2, where it has remained to date.

Pad A3 is a raised, rectangular, concrete pad served by a raised road. The pad appeared complete Ground scarring and an unidentified object were first observed at the site of the present pad. The only activity noted at this pad since its completion has been a 50-foot unidentified object, possibly the same object observed This object was moved off the pad to the west side prior where it remains to date. The object has been observed predominantly in a horizontal position but was observed in a vertical position The possibility that this object is a launcher cannot be ruled out.

Pads A4 and A5, first observed in a completed state on are square, concrete, raised pads served by raised roads. A cable line from Pad A4 leads approximately 180 feet west to an earth-covered building. Pad A4 has not been observed occupied at any time. Adjacent to the west side of Pad A5 is a small road-served revetted building. A wall, bisected by the servicing road, is located on the northern side of Pad A5. an unidentified piece of equipment was observed on Pad A5.

Pad A6 was observed for the first time. This generally T-shaped concrete-surfaced pad is the only pad at Launch Area A which is not raised or road served. It has been occupied by an unidentified object since it was first observed. A possible purpose for the pad may be as a radar position.

The control-guidance area at Launch Area A is composed of an earth-mounded control bunker and a large concrete hardstand, measuring approximately 120 by 60 feet, just south of the bunker. The earth-mounded bunker has 2 canopied entrances on the northern side and 2 possible vents on the top. Several electronics vehicles, including the GANEF mobile tracking/guidance radar (Figure 6 and Table 1), have been identified on the hardstand and on the graded area adjacent to the bunker. Generally, these vehicles are cable-connected to the bunker and in turn the bunker is cable-connected to each of the 6 pads. A C-shaped vehicle dock, similar to those at the Operational Support Area, is located on the hardstand.

A radar mound in the northeastern portion of the facility was first observed The mound was occupied by a BARLOCK radar A new mound was constructed directly north of the old one in the spring of 1967 and the BARLOCK was moved to this mound where it has remained to date. The older mound is presently occupied by an unidentified mobile radar. Three additional radar mounds are located in the vicinity of the Launch Complex. One is located just west of Launch Area A and is possibly cable-connected to the BARLOCK mound in Launch Area A. The second is located just north of the Assembly/Checkout Area and the third is located northeast of Launch Area B. Cable connections can be traced from both mounds to the BARLOCK mound in Launch Area A.

A calibration tower, 250 feet southeast of Pad A2, was first observed Vehicles have been observed in the general vicinity of the tower since it was constructed.



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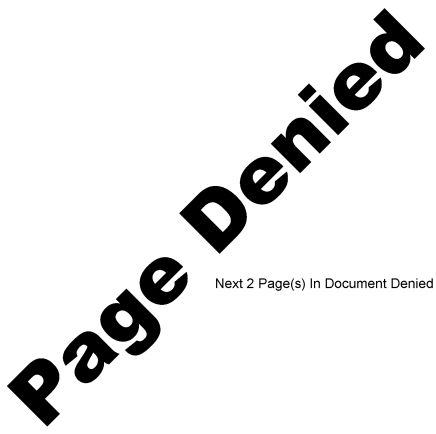


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## LAUNCH AREA B

Launch Area B (Figures 9 and 10) is a double-fenced facility containing 2 launch pads, a control-guidance area, and 4 support buildings. The facility is a mirror image of the original Launch Area A and is located approximately 3,800 feet east of Launch Area A.

the date when the test range was first observed, an excavation containing a concrete base was observed east of the Assembly/Checkout Area. Subsequently, this base was used as a foundation for the control bunker at Launch Area B.

Not until was construction started on Launch Area B. At that time 3 of the support buildings were observed in a late stage of construction. earth scarring for a looping rectangular road and an extension of the access road was apparent. At this time, the area of construction was designated as a new launch area and it was apparent that the previously discussed concrete base would be the site of a control bunker. Cable scars leading from the control area to the areas where pads B1 and B2 would be located were apparent Construction progressed slowly through the winter of 1966-67. However, a superstructure for the control bunker had been constructed and the service roads had been raised and apparently formed out for surfacing. Photographic coverage revealed that the roads and both pads had been surfaced with concrete. The control bunker is earth-covered and is still under construction. Launch Area B is presently not operational and remains under construction.





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## ASSEMBLY/CHECKOUT AREA

The Assembly/Checkout Area (Figures 11 and 12) is a secured area located between Launch Areas A and B, containing 7 road-served support buildings and a heatplant. The large 2-bay assembly/storage building (Figure 12, item 5), the heatplant (Figure 12, item 8), and a security building were probably in existence Steamlines lead from the heatplant to most buildings and bunkers in Launch Area A, Launch Area B, and the Assembly/Checkout Area. Lightning arresters, located at each corner of the large 2-bay assembly/storage building, are indicative of solid propellant storage/handling.

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An expansion of the area began after a 3-year time lapse when 2 assembly-type buildings southeast of the heatplant were first observed The more westerly assembly building (Figure 12, item 10) is composed of a high-bay and a side shop. A high earthen wall flanks the west side of the building. The more easterly assembly building (Figure 12, item 12) is constructed in 2 steps with an earthen wall on the west side. A concrete basin is located directly south of this building and is connected to an excavation by a ditch.

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Another new building (Figure 12, item 7) was first observed under construction To date, the building is not externally complete and contains 4 horizontal possible storage containers approximately half the length of the building.

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## UNIDENTIFIED AREA

A double-fenced unidentified area (Figures 13 and 14), previously referred to as a possible launch area and a possible storage area, is located approximately 2,500 feet south-southwest of Launch Area B. The area was first observed Large-scale coverage revealed the area consisted of 4 small bunkers in an east-west line, a drive-in bunker, 1 bunker in the northwest corner, 2 possible underground entrances, 2 large and 2 small hardstands, 2 guard towers, and an open ditch leading from Launch Area A. The area is served by unimproved roads leading from the launch complex.

To date, no new construction has taken place. The drive-in bunker was removed and the 2 possible underground entrances were covered over The far eastern bunker and the northwest guard tower were removed between January and March 1966. Although track activity has been apparent in the area since initial observance, vehicles have never been identified.

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## DISCUSSION

Emba Launch Area A has been utilized predominantly for testing of the SA-4 GANEF surface-to-air missile (SAM) (Figure 15). No other missile, missile component, or equipment associated with another missile has been identified in the launch area. However, tactical surface-to-surface missile (SSM) equipment has been observed at Support Area B and the Operational Support Area. Also an SSM SCUD training area exists approximately 3 nm southeast of the Operational Support Area.

Launch Area B is presently in the late stages of external construction. Since it is a mirror image of Launch Area A, it seems likely that further testing of the SA-4 on a larger scale or training of SA-4 units will continue at Emba. However, the possibility of an entirely new missile system at Launch Area B cannot be excluded.

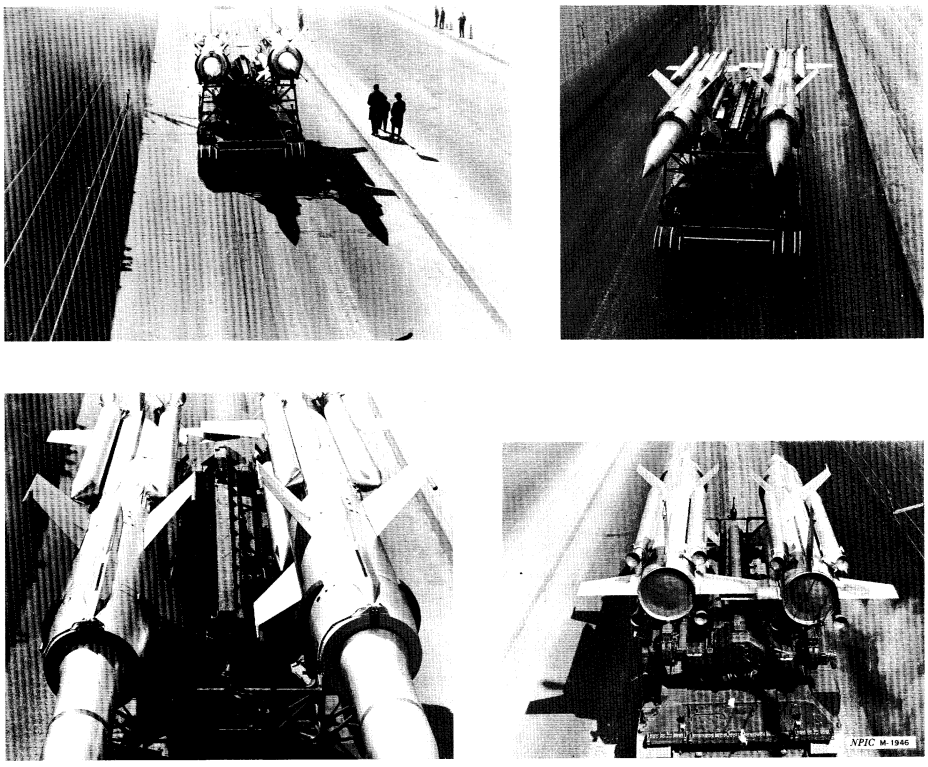


*FIGURE 15. GANEF MISSILE, AS SEEN IN 7 NOVEMBER 1966 PARADE.*





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MAPS OR CHARTS

AMS. Series DESPA-2, Sheet NM 40A, 1st ed, Nov 64, scale 1:250,000 (TOP SECRET RUFF)

SAC. US Air Target Chart, Series 200, scale 1:200,000

RELATED DOCUMENTS

NPIC. *Emba Missile Test Center, USSR,* Sep 65 (TOP SECRET CHESS RUFF) 25X1

NPIC. R-1270/64, *New Surface-to-Air Missile, Moscow Parade, 1 May 1964,* Jul 64 (SECRET)

REQUIREMENT

CIA. C-DI6-83,316 (revised)

NPIC PROJECT

11468AC/66



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